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Malignant Melanoma in a Calf

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ably long time considering the seriousness of her disease. One month from the date of entry, permission was received from the owner to administer euthanasia.

Lesions

Post-mortem revealed chronic purulent mastitis of the left quarters, metastatic focal abscesses of the lungs, valvular thrombosis of the right atrio-ventricular and pulmonary semilunar valves, and extensive thrombosis of the pulmonary artery. Samples for bacteriological study were taken from the udder of the dead animal. They revealed pure cultures of *Corynebacterium pyogenes.* This leaves a question as to which organism was the primary invader in this animal.

There has not been a great deal of specific research on *Cl. welchii* mastitis, and many of the things concerning it are more or less theoretical. It is believed that clostridia are secondary invaders occurring in conjunction with some other organisms. Staphylococci or *C. pyogenes* are quite often the primary invaders which produce tissue necrosis providing anaerobic conditions in which the clostridia can grow if present. *Cl. welchii* organisms are quite widespread in nature and may enter by way of the teat orifice or as a result of traumatism.

—W. F. Chapin, '44

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2 **Malignant Melanoma in a Calf.** On March 2, 1944, an 8-month-old male Aberdeen Angus calf was presented at the Stange Memorial Clinic with the history of a growth in the scrotum which had increased rapidly in size in the last two months. The growth was present but small when the animal was born. The animal was in good condition when presented at the clinic. Examination revealed that the neoplastic growth was located in the distal end and the walls of the scrotum.

The calf was cast, the scrotum shaved, and painted with tincture of iodine. An incision was made which completely circumscribed the upper part of the scrotum. By blunt dissection, each spermatic cord was isolated and divided with an emasculator. The testicles, though small, were not involved in the tumorous process. Severance of several bundles of connective tissue completed removal of the testicles, the neoplastic growth, and the attached scrotal sac. A sulfanilamide pack was placed in the wound, and the skin edges were brought into apposition with a continuous silk suture.

Appearance of the scrotum of the 8-month-old calf affected with a malignant melanoma.

The neoplastic growth was circular with a diameter of 25-30 cm. Incision of the tumor revealed it to be firm and homogeneously black in color. Microscopic examination indicated that the tumor was malignant in nature. Diagnosis of malignant melanoma was based upon the presence of large amounts of melanin in the cells, the presence of neoplastic tissue in the lymphatics surrounding the growth, and the history of the rapid growth of the tumor. Presence of an extremely large amount of melanin in the cells made it impossible to accurately determine the kind of tissue involved upon tissue-section examination. That metastasis had occurred prior to the operation is highly probable.

The sutures and pack were removed 2 days after the operation. Infection was not apparent at this time. However, the calf had failed to eat its feed and showed a temperature of 103° F. On March 6, the calf was still off feed so a No. 10 capsule of equal parts ginger and nux vomica

was administered as a ruminatoric. A slight swelling of the prepuce just anterior to the incision was noted. It could not be determined whether this swelling was due to gravitation of infection or merely an inflammatory edema. Two No. 10 capsules of sulfanilamide were administered per os as a preventive measure against infection.

Treatment

On March 7, the calf appeared somewhat toxic, and the wound had a fetid odor. The calf was cast, and the area of the wound examined. The swelling anterior to the wound was found to be a pocket containing necrotic tissue. The pocket was opened to remove the necrotic tissue and establish drainage. The wound was treated with liquid bipp solution (1 part bismuth subnitrate, 2 parts iodoform, 15 parts liquid petrolatum), and the scrotal wound flushed out with sodium perborate solution. Again 2 No. 10 capsules of sulfanilamide were administered per os to prevent possible septicemia, and a No. 10 capsule of ginger and nux vomica was given as a ruminatoric.

On March 19, the calf was again on full feed, and the wounds were healing by granulation. Treatment was ceased at this time. The calf was discharged from the clinic 3 weeks after its entry.

Malignant melanomas occur quite commonly in gray and white horses, the common primary sites being the ventral surface of the tail, the recto-anal region, the external genitals of both sexes, the perineum, and the head and shoulders. This case of malignant melanoma of the scrotum of a calf was of interest not only because of its rare location, but because of the species of animal involved.

—C. L. Syverson, '45

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3 **Partial Splenectomy in a Dog.** A 10-year-old Scottish Terrier was brought to the Beverly Hills Small Animal Clinic with a history of having an abdominal enlargement. On examination an enlarged body could be palpated in the abdominal cavity. It was the clinician's belief that this was a tumor, possibly of a mesenteric lymph node. On the clinician's advice the owner consented to an operation for exploration and possible removal of the suspected tumor.

Preparation

The dog was given a basal anesthetic of 16 mg. of H-M-C (hyoscine-morphine-cactoid) subcutaneously. The abdominal area was closely clipped and scrubbed with tincture of green soap. Ether was then applied to remove any surface grease or oil, followed by an application of mercresin. The patient was placed on the operating table and the anesthesia completed with ether. A sterile shroud with an ovoid slit was placed over the abdomen, leaving the operative site exposed. A 15 cm. incision was made to the right of the median line, two-thirds of which was posterior to the umbilicus and parallel to the median line. The skin and rectus abdominus muscle were incised and this scalpel discarded. Sterile towels were attached to the edges of the skin incision with towel forceps as advocated by Markowetz. The incision was enlarged with Mayo scissors. On entering the abdominal cavity, a large tumorous mass was found enfolded in the omentum and mesentery. This proved to be two enlargements on the spleen. The ventral portion of the spleen had a spherical tumorous growth which was approximately 13 cm. in diameter. The dorsal portion had an enlarged growth 5 cm. in diameter. The vascular supply to the normal portion of the spleen was great enough to prevent necrosis of these two tumorous growths.

Surgical Procedure

The dorsal and ventral areas of the spleen containing these tumors were tied off with No. 1 chromic catgut. These were then removed from the normal splenic tissue. The incised edges were cauterized with the electric cautery. Very little hemorrhage resulted by tying off and cauterizing the spleen in this manner. The omental tissue and remainder of the